MULTI-SECTIONAL SYSTEM FOR CONTINUOUS GAS SEPARATION

ABSTRACT OF THE DISCLOSURE

A system for separating a gaseous constituent from a gaseous mixture includes a substantially sealed passageway extending between a first exhaust port and a second exhaust port. An entry port for a gas mixture to be separated opens into the passageway. At least three gas-permeable electrodes are disposed across the passageway at intervals. The electrodes divide the passageway into multiple sections. Each section is bounded at opposing ends by an electrode, and the sections are disposed in serial fashion through at least a portion of the passageway. A high-voltage static electric field may be applied to opposing electrodes of one or more sections. When voltage is so applied, gas may be drawn through a static electric field in one or more sections, by applying suction to the exhaust ports.